

INTOXILYZER® 8000 CALIBRATION ADJUSTMENT

Intoxilyzer® 8000 Serial Number: 80-004205 Location: TOXL

- A. Flow Sensor Calibration and Verification Check (Level 3,M,C,F)
1. Replaced o-rings if damaged ADJUST VERIFY
 2. Flow Meter Serial Number: 40655 & 55260
 3. Air Supplied to Intoxilyzer® 8000 at:
 - a. 5 L/min 15 L/min 30 L/min
 4. Flow Rate Calibration Printout Attached
 - a. Correlation ≥ 0.99000
 5. Flow Sensor Calibration Verification (Level 3,D,F)
 - a. 10 L/min: 0. ___ L/S X 60 Sec/min = _____ L/min
 - b. 20 L/min: 0. ___ L/S X 60 Sec/min = _____ L/min
 - c. Flow Rates within ± 1 L/min of Expected Value

#5
SEE
REMARKS

- B. Gas Tank Sensor Check (Level 3,D,G)
1. Display: 451 psi Regulator: 475 psi
 2. Display and Regulator within 50 psi
 3. Completed tare of tank sensor if needed (Level 3,M,C,G)

- C. Optical Bench Calibration and Verification Check (Level 3,M,C,O)
1. Autocalibration Printout Attached
 - a. Max Power Res Value ≥ 10
 - b. Auto Range Res Value ≥ 4
 2. Simulator Solutions for Optical Bench Calibration Adjustment
 - a. Set # Solutions to Run at 5

Soln.	g/210 L	Lot No.	Exp. Date	Simulator SN
1	0.000 (ACTUAL)	NA - MilliQ H ₂ O	NA - MilliQ H ₂ O	MP3066
2	0.040 (0.040)	201808D	8-22-20	MP3067
3	0.080 (0.082)	201707E	7-29-19 5 CEE	MP3068
4	0.150 (0.151)	201811E	11-26-20	MP3069
5	0.300 (0.301)	201803H	3-22-20	MP3070

3. 0.100 AC Calibration Gas for H₂O Adjustment
 - a. Lot No. 13518100A3 Cyl No. 6 Exp. Date: 8-5-20
4. Atmospheric Pressure
 - a. 931 mbar Displayed by Intoxilyzer® 8000
 - b. 945 mbar Adjusted to using barometer
 - c. 944 mbar on Auto Calibration Report printout
5. Screen displayed "Calibration Success"

6. Calibration Adjustment Printout Attached
- a. Solution 1 Avg % Abs ≤ 0.2500
 - b. Solution 2-5 REL STD DEV ≤ 3.000
 - c. Residual (g/210 L) Values for Solutions 1-5 ≤ 0.0020 for 3 μm and 9 μm channels
 - d. Dry Gas H₂O Adjustment Sum for 3 μm and 9 μm channels within ± 10

	Average		H ₂ O Adjust		
3 μm	<u>4443</u>	+	<u>318</u>	=	<u>4761</u>
9 μm	<u>4312</u>	+	<u>449</u>	=	<u>4761</u>

7. Optical Bench Calibration Verification (Level 1, S and C)
- a. Wet Calibration Check
 - i. Low AC Known Value ≤ 0.03 AC: 0.015 AC
Sim. SN: DR5113 Lot No.: 201805C Exp. Date: 5.30.20
 - ii. High AC Known Value ≥ 0.25 AC: 0.300 AC
Sim. SN: DR7089 Lot No.: 17350 Exp. Date: 10.11.19
 - b. Dry Calibration Check: Known Value 0.08 AC
Lot No. 3491708043 Cyl No. 7 Exp. Date: 2/5/20
Test 1 0.079 AC Test 4 0.080 AC Test 7 0.079 AC
Test 2 0.079 AC Test 5 0.080 AC Test 8 0.079 AC
Test 3 0.079 AC Test 6 0.079 AC Test 9 0.079 AC
Average 0.079 AC
 - c. Wet Calibration Check and Dry Calibration Check AC results are within ± 0.005 or $\pm 5\%$ (whichever is greater) of stated value.

D. Remarks/Maintenance: FLOW MONITOR NO LONGER PROVIDES FEED BACK. INSTRUMENT WILL BE USED IN CLASSROOM ONLY UNTIL FLOW MONITOR IS FIXED. ADJUSTED DUE TO 0.080 AC STANDARD RETURNING 0.075 AC RESULTS. STILL WITHIN ± 0.005 TOLERANCE

Instrument is acceptable to be used in the field.

CLASSROOM ONLY.

Charles E. Ed
Breath Analyst Signature

6/14/2019
Date

NA
Reviewed by

NA
Date

Intoxilyzer Test Record and Checklist
NDOAG Crime Lab. Div., Bismarck, ND 58501

CMI, Inc. Intoxilyzer Alcohol Analyzer
North Dakota Model 8000 SN 80-004205
Location = TOXL 8164.14.00 09/16
06/14/2019 14:23

Flow Rate Calibration*****

1: Rate (Liters/min) = 5
 SQRT(Diff)) = 0.000

2: Rate (Liters/min) = 15
 SQRT(Diff)) = 5.566

3: Rate (Liters/min) = 30
 SQRT(Diff)) = 19.441

Dependent Data Scale Factor = 100000 L/min

Independent Data Scale Factor = 256

Rounded Slope = 487

Rounded Intercept = 627463

Correlation = 0.99195



FLOW SENSOR CALIBRATION

TOXL
Intoxilyzer - Alcohol Analyzer
Model 8000 SN 80-004205
06/14/2019 14:36:56

Auto Calibration
Max Power Res Value = 45
Auto Range Res Value = 22

TOXL
 Intoxilyzer - Alcohol Analyzer
 Model 8000 SN 80-004205
 06/14/2019 14:36:56

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Auto Calibration

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  <<<<<      3um      >>>>>      <<<<<      9um      >>>>>
  -----
  Solution = 0.000 g/210L or 0.0000 mg/l, Samples = 4, Discarded = 1
  Sample      % Abs      (% Abs Ref)      % Abs      (% Abs Ref)
  Sample #1   0.0720      (0.0070)         0.1580      (0.0080)
  Sample #2   0.0750      (0.0760)         0.1750      (0.0160)
  Sample #3   0.0630      (0.1190)         0.1830      (0.0300)
  Sample #4   0.0640      (0.1500)         0.1490      (0.0640)
  Avg % Abs   0.0673      (0.1150)         0.1690      (0.0367)
  STD DEV     0.0067      (0.0372)         0.0178      (0.0247)
  REL STD DEV 9.889      (32.315)         10.519      (67.322)
  
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  -----
  Solution = 0.040 g/210L or 0.1905 mg/l, Samples = 4, Discarded = 1
  Sample      % Abs      (% Abs Ref)      % Abs      (% Abs Ref)
  Sample #1   0.7890      (0.0000)         1.5610      (0.0060)
  Sample #2   0.7880      (0.0240)         1.6050      (0.0020)
  Sample #3   0.7490      (0.0600)         1.5790      (0.0120)
  Sample #4   0.7750      (0.0530)         1.5990      (0.0000)
  Avg % Abs   0.7707      (0.0457)         1.5943      (0.0047)
  STD DEV     0.0199      (0.0191)         0.0136      (0.0064)
  REL STD DEV 2.577      (41.797)         0.854      (137.766)
  
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  -----
  Solution = 0.082 g/210L or 0.3905 mg/l, Samples = 4, Discarded = 1
  Sample      % Abs      (% Abs Ref)      % Abs      (% Abs Ref)
  Sample #1   1.4420      (-0.0220)        2.9790      (0.0000)
  Sample #2   1.4830      (-0.0310)        2.9930      (0.0310)
  Sample #3   1.4590      (-0.0100)        2.9910      (0.0250)
  Sample #4   1.4680      (-0.0080)        3.0030      (0.0290)
  Avg % Abs   1.4700      (-0.0163)        2.9957      (0.0283)
  STD DEV     0.0121      (0.0127)         0.0064      (0.0031)
  REL STD DEV 0.825      (78.006)         0.215      (10.783)
  
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  -----
  Solution = 0.151 g/210L or 0.7190 mg/l, Samples = 4, Discarded = 1
  Sample      % Abs      (% Abs Ref)      % Abs      (% Abs Ref)
  Sample #1   2.7030      (-0.0150)        5.3420      (-0.0040)
  Sample #2   2.6700      (0.0200)         5.3550      (0.0150)
  Sample #3   2.7080      (0.0120)         5.3520      (0.0070)
  Sample #4   2.6650      (0.0310)         5.3590      (0.0130)
  Avg % Abs   2.6810      (0.0210)         5.3553      (0.0117)
  STD DEV     0.0235      (0.0095)         0.0035      (0.0042)
  REL STD DEV 0.877      (45.426)         0.066      (35.686)
  
```

```

  -----
  Solution = 0.301 g/210L or 1.4333 mg/l, Samples = 4, Discarded = 1
  Sample      % Abs      (% Abs Ref)      % Abs      (% Abs Ref)
  Sample #1   5.1620      (0.0000)         10.0970     (0.0010)
  Sample #2   5.2100      (0.0000)         10.1530     (0.0370)
  Sample #3   5.1800      (0.0220)         10.1050     (0.0420)
  Sample #4   5.1860      (0.0080)         10.0850     (0.0310)
  Avg % Abs   5.1920      (0.0100)         10.1143     (0.0367)
  STD DEV     0.0159      (0.0111)         0.0349      (0.0055)
  REL STD DEV 0.306      (111.355)        0.346      (15.021)
  
```

TOXL
 Intoxilyzer - Alcohol Analyzer
 Model 8000 SN 80-004205
 06/14/2019 14:36:56

Auto Calibration

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<<<<< 3um >>>>>			<<<<< 9um >>>>>		
Zero Order Coef	-180.36			-225.37	
First Order Coef	2724.22			1333.12	
Second Order Coef	13.54			10.47	
Act (g/210L)	Fit (g/210L)	Residual (g/210L)	Act (g/210L)	Fit (g/210L)	Residual (g/210L)
0.000	0.000	-0.0001	0.000	0.000	-0.0000
0.040	0.040	-0.0005	0.040	0.040	-0.0005
0.082	0.081	0.0011	0.082	0.081	0.0009
0.151	0.152	-0.0006	0.151	0.151	-0.0005
0.301	0.301	0.0001	0.301	0.301	0.0001

<<<<< 3um >>>>>		<<<<< 9um >>>>>	
Solution = 0.100 g/210L or 0.4762 mg/l, Samples = 4, Discarded = 1			
Sample			
Sample #1	4444.00		4317.00
Sample #2	4455.00		4321.00
Sample #3	4452.00		4326.00
Sample #4	4423.00		4291.00
Avg	4443.3335		4312.6665
STD DEV	17.6730		18.9297
REL STD DEV	0.398		0.439
H2O adjust (mg/l*10k)	318		449

Atmospheric Pressure = 944

*****CALIBRATION SUCCESSFUL*****



Intoxilyzer Test Record and Checklist
NDOAG Crime Lab. Div., Bismarck, ND 58501

CMI, Inc. Intoxilyzer Alcohol Analyzer
North Dakota Model 8000 SN 80-004205
Location = TOXL 8164.14.00 09/16
06/14/2019 15:22

WET CAL CHECK

Test	AC	Time
01 Room Air	0.000	15:23
02 Std. Sol.	0.014	15:23
03 Room Air	0.000	15:24
04 Std. Sol.	0.014	15:25
05 Room Air	0.000	15:25
06 Std. Sol.	0.014	15:26
07 Room Air	0.000	15:26

08 Sim Temp = 34.0°C

Simul Ser No = DR5113
Std Sol No = 201805C
County = 08 Oper No. = 666666



Operator Signature
CHARLES EDER

Remarks: *Low AC*
0.015 AC

Form 106-I8000

Intoxilyzer Test Record and Checklist
NDOAG Crime Lab. Div., Bismarck, ND 58501

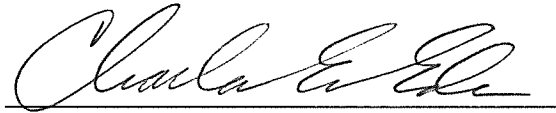
CMI, Inc. Intoxilyzer Alcohol Analyzer
North Dakota Model 8000 SN 80-004205
Location = T0XL 8164.14.00 09/16
06/14/2019 15:27

WET CAL CHECK

Test	AC	Time
01 Room Air	0.000	15:28
02 Std. Sol.	0.296	15:29
03 Room Air	0.000	15:29
04 Std. Sol.	0.298	15:30
05 Room Air	0.000	15:30
06 Std. Sol.	0.298	15:31
07 Room Air	0.000	15:32

08 Sim Temp = 34.0°C

Simul Ser No = DR7089
Std Sol No = 17350
County = 08 Oper No. = 666666



Operator Signature
CHARLES EDER

Remarks: HIGH AC
 0.300 AC

Form 106-I8000

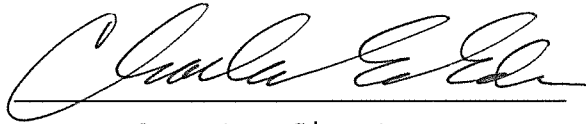
Intoxilyzer Test Record and Checklist
NDOAG Crime Lab. Div., Bismarck, ND 58501

CMI, Inc. Intoxilyzer Alcohol Analyzer
North Dakota Model 8000 SN 80-004205
Location = TOXL 8164.14.00 09/16
06/14/2019 15:36

DRY CAL CHECK

Test	AC	Time
01 Room Air	0.000	15:36
02 Std. Gas	0.080	15:37
03 Room Air	0.000	15:37
04 Std. Gas	0.080	15:37
05 Room Air	0.000	15:38
06 Std. Gas	0.079	15:38
07 Room Air	0.000	15:39

Lot No = 34917080A3
Cyl No = 7
Exp Date = 02/05/2020
County = 08 Oper No. = 666666



Operator Signature
CHARLES EDER

Remarks: CALIBRATION CHECK
0.080 AC

Form 106-I8000

Intoxilyzer Test Record and Checklist
NDOAG Crime Lab. Div., Bismarck, ND 58501

CMI, Inc. Intoxilyzer Alcohol Analyzer
North Dakota Model 8000 SN 80-004205
Location = TOXL 8164.14.00 09/16
06/14/2019 15:40

DRY CAL CHECK

Test	AC	Time
01 Room Air	0.000	15:40
02 Std. Gas	0.079	15:41
03 Room Air	0.000	15:41
04 Std. Gas	0.079	15:42
05 Room Air	0.000	15:42
06 Std. Gas	0.079	15:42
07 Room Air	0.000	15:43

Lot No = 34917080A3
Cyl No = 7
Exp Date = 02/05/2020
County = 08 Oper No. = 666666



Operator Signature
CHARLES EDER

Remarks: CALIBRATION CHECK
0.080 AC

Form 106-I8000